

What is claimed is:

1. A hologram display comprising:
 - a projector;
 - a hologram screen; and
 - at least one filter arranged between the projector and the hologram screen, for absorbing light having a wavelength at which the diffraction efficiency in the spectral distribution characteristic is peak in a specific wavelength area.
2. The hologram display of claim 1, wherein a projected beam from the projector and a reproduced beam from the hologram screen have a color difference $\Delta u/v$ that is equal to or smaller than 0.03.
3. A hologram screen comprising:
 - a hologram element for diffracting a projected beam from a projector; and
 - a light scattering element having a scattering angle of five degrees or larger.
4. The hologram screen of claim 3, wherein the light scattering element is arranged on the projector side.
5. The hologram screen of claim 3, wherein the light scattering element is arranged opposite to the projector.
6. The hologram screen of claim 3, wherein the light scattering element scatters a projected beam whose incident angle is within a specific range.
7. The hologram screen of any one of claims 4 and 5, wherein the light scattering element scatters a projected beam whose incident angle is within a specific range.
8. The hologram screen of claim 3, wherein the vertical transmittance of the light scattering element is within the range of 30% to 100%.
9. The hologram screen of claim 4, wherein the vertical transmittance of the light scattering element is within the range of 30% to 100%.

10. The hologram screen of claim 6, wherein the vertical transmittance of the light scattering element is within the range of 30% to 100%.

5 11. The hologram screen of claim 7, wherein the vertical transmittance of the light scattering element is within the range of 30% to 100%.

12. The hologram screen of claim 3, wherein the light scattering element scatters an incident beam over an angle of θ that is defined as follows:

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$$\sin^{-1}\{\sin\theta_i - \lambda_1/\lambda_0 \cdot (\sin\theta_o - \sin\theta_r)\} \leq \theta$$
$$\leq \sin^{-1}\{\sin\theta_i - \lambda_2/\lambda_0 \cdot (\sin\theta_o - \sin\theta_r)\}$$

where λ_0 is a recording wavelength used to make the hologram element, λ_1 is 380 nm, λ_2 is 780 nm (visible light ranging from 380 nm to 780 nm), θ_r is an incident angle of a reference beam used to make the hologram
15 element, θ_o is an incident angle of an object beam used to make the hologram element, and θ_i is an exiting angle of a diffracted beam emanating from the hologram element.

13. The hologram screen of any one of claims 8 and
20 10, wherein the light scattering element scatters an incident beam over an angle of θ that is defined as follows:

$$\sin^{-1}\{\sin\theta_i - \lambda_1/\lambda_0 \cdot (\sin\theta_o - \sin\theta_r)\} \leq \theta$$
$$\leq \sin^{-1}\{\sin\theta_i - \lambda_2/\lambda_0 \cdot (\sin\theta_o - \sin\theta_r)\}$$

25 where λ_0 is a recording wavelength used to make the hologram element, λ_1 is 380 nm, λ_2 is 780 nm (visible light ranging from 380 nm to 780 nm), θ_r is an incident angle of a reference beam used to make the hologram element, θ_o is an incident angle of an object beam used
30 to make the hologram element, and θ_i is an exiting angle of a diffracted beam emanating from the hologram element.

14. The hologram screen of claim 9, wherein the light scattering element scatters an incident beam over an angle of θ that is defined as follows:

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$$\sin^{-1}\{\sin\theta_i - \lambda_1/\lambda_0 \cdot (\sin\theta_o - \sin\theta_r)\} \leq \theta$$
$$\leq \sin^{-1}\{\sin\theta_i - \lambda_2/\lambda_0 \cdot (\sin\theta_o - \sin\theta_r)\}$$

where λ_0 is a recording wavelength used to make the
hologram element, λ_1 is 380 nm, λ_2 is 780 nm (visible
light ranging from 380 nm to 780 nm), θ_r is an incident
angle of a reference beam used to make the hologram
5 element, θ_o is an incident angle of an object beam used
to make the hologram element, and θ_i is an exiting angle
of a diffracted beam emanating from the hologram element.

15. The hologram screen of claim 7, wherein the
light scattering element scatters an incident beam over
10 an angle of θ that is defined as follows:

$$\sin^{-1}\{\sin\theta_i - \lambda_1/\lambda_0 \cdot (\sin\theta_o - \sin\theta_r)\} \leq \theta$$
$$\leq \sin^{-1}\{\sin\theta_i - \lambda_2/\lambda_0 \cdot (\sin\theta_o - \sin\theta_r)\}$$

where λ_0 is a recording wavelength used to make the
hologram element, λ_1 is 380 nm, λ_2 is 780 nm (visible
15 light ranging from 380 nm to 780 nm), θ_r is an incident
angle of a reference beam used to make the hologram
element, θ_o is an incident angle of an object beam used
to make the hologram element, and θ_i is an exiting angle
of a diffracted beam emanating from the hologram element.

20 16. The hologram screen of claim 11, wherein the
light scattering element scatters an incident beam over
an angle of θ that is defined as follows:

$$\sin^{-1}\{\sin\theta_i - \lambda_1/\lambda_0 \cdot (\sin\theta_o - \sin\theta_r)\} \leq \theta$$
$$\leq \sin^{-1}\{\sin\theta_i - \lambda_2/\lambda_0 \cdot (\sin\theta_o - \sin\theta_r)\}$$

25 where λ_0 is a recording wavelength used to make the
hologram element, λ_1 is 380 nm, λ_2 is 780 nm (visible
light ranging from 380 nm to 780 nm), θ_r is an incident
angle of a reference beam used to make the hologram
element, θ_o is an incident angle of an object beam used
30 to make the hologram element, and θ_i is an exiting angle
of a diffracted beam emanating from the hologram element.